

Appl. No. 09/825,276
RCE Amendment and
Reply to Final Office action of 27 July 2005

Page 10 of 15

REMARKS / DISCUSSION OF ISSUES

Claims 1-3 and 5-21 are pending in the application.

Because the amendment filed by the applicants on 13 May 2005 failed to affect the allowability of the claims, the amendment to the claims are canceled herein, and the applicants retract any and all prior comments and remarks regarding these amended claims.

The Office action rejects claims 1-3, 7, 9, 13, 15, and 17 under 35 U.S.C. 102(a) over Park et al. (WO 00/08706, hereinafter Park). The applicants respectfully traverse this rejection.

Claim 1, upon which claims 3, and 5-12 depend, claims a method that includes transmitting a first signal from a primary station that includes an indication of a transmit power level used for the transmitting, determining radio channel characteristics at a secondary station, based on the indication of the transmit power level, and transmitting an uplink signal from the secondary station on an access channel giving an indication of the radio channel characteristics.

Claim 13, upon which claim 14 depends, claims a primary station that includes a first transceiver that transmits signals on a downlink channel, at least one of the signals including an indication of a transmit power level used to transmit the signal, and a secondary station that includes a measuring device that is configured to determine radio channel characteristics of the downlink channel, based on the indication of the transmit power level.

Claim 15, upon which claim 16 depends, also claims a secondary station that includes a measuring device that is configured to determine radio channel characteristics of a downlink channel based on an indicator of transmit power from the primary station.

Appl. No. 09/825,276
RCE Amendment and
Reply to Final Office action of 27 July 2005

Page 11 of 15

Park does not teach transmitting a signal from the primary station that includes an indication of a transmit power level, and does not teach determining radio characteristics at the secondary station based on the indication of the transmit power level.

Park teaches the transmission of a beacon signal from a primary station, but does not teach that this beacon signal includes an indication of the transmit power level. Park teaches that the secondary station measures the received power level, and transmits an indication of the received power level to the primary station. The primary power station, being aware of both the transmit power level and the received power level is then able to determine the radio channel characteristics.

As is known in the art, and as taught by Park, the radio channel characteristics are determined based on the ratio of the received power to the transmit power (Park, page 7, lines 16-20). The Office action asserts that a measurement of received power is a radio channel characteristic. The applicants respectfully disagree, because a radio channel characteristic characterizes an effect upon a transmitted signal as it travels from a transmitter to a receiver within the radio channel. To determine an effect, knowledge of the original characteristics of the transmitted signal is required. Without an indication of the transmit power level, Park's secondary station cannot determine the radio channel characteristics; it can only measure and report the received signal power. Park's primary station, having knowledge of the characteristics of the original transmitted signal, is thereafter able to determine the radio channel characteristics by comparing the reported received power to the transmitted power. As noted by Park, the parameters required to determine the radio channel characteristics "are information that belongs to the base station" (Park, page 6, lines 5-11).

Because Park does not teach transmitting a signal from the primary station that includes an indication of a transmit power level, and does not teach determining radio characteristics at the secondary station based on the indication of the transmit power level, the applicants respectfully maintain that claims 1, 3, 7, 9, 13, and 15 are patentable under 35 U.S.C. 102(a) over Park.

Appl. No. 09/825,276
RCE Amendment and
Reply to Final Office action of 27 July 2005

Page 12 of 15

Claim 2, upon which claims 5-12 depend, claims a method that includes transmitting an uplink signal from a secondary station on the access channel, which uplink signal includes an indication of a transmit power level used for the transmitting, and determining radio channel characteristics of the access channel at the primary station, based on the indication of the transmit power.

In like manner, claim 17, upon which claim 18 depends, claims a primary station that includes a transceiver that receives an uplink access channel signal that includes an indication of a transmit power level associated with the signal

Park's teachings are summarized above. Park does not teach transmitting an indication of the secondary station's transmit power to the primary station for determining radio channel characteristics. Therefore, the applicants respectfully maintain that claims 2, 7, 9, and 17 are patentable under 35 U.S.C. 102(a) over Park.

The Office action rejects claims 5 and 8 under 35 U.S.C. 103(a) over Park and Cao et al. (EP 0913957, hereinafter Cao). The applicants respectfully traverse this rejection, based on the remarks above regarding Park and claims 1 and 2, upon which these claims depend, and based on the following remarks.

In claim 5, the secondary station retransmits an access preamble signal at successively increasing power levels until an acknowledgement signal is received from the primary station, and in response to the receipt of the acknowledgement signal, transmits a message containing an indication of the power level associated with the access preamble signal for which the acknowledgement signal was received.

The Examiner's attention is requested to MPEP 2142, wherein it is stated:

"To establish a *prima facie* case of obviousness ... the prior art reference (or references when combined) *must teach or suggest all the claim limitations*... If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness."

The Office action cites Cao for teaching the retransmission of an access preamble signal at successively increasing power levels until an acknowledgement signal is received from the primary station. However, the Office action fails to show a

Appl. No. 09/825,276
RCE Amendment and
Reply to Final Office action of 27 July 2005

Page 13 of 15

teaching of transmitting a message containing an indication of the power level associated with the access preamble signal for which the acknowledgement signal was received. As such, the applicants respectfully maintain that the rejection of claim 5 is unfounded, per MPEP 2142.

The Office action rejects claim 10 under 35 U.S.C. 103(a) over Park and Oberholtzer et al. (USP 5465399). The applicants respectfully traverse this rejection, based on the remarks above regarding Park and claims 1 and 2, upon which claim 10 depends, and based on the following remarks.

In claim 10, the access preambles that are transmitted by the secondary station are encoded with a selected one of a plurality of signatures, the selected signature being chosen according to a quantity to be signaled.

The Office action asserts that Oberholtzer teaches selecting a signature from a plurality of signatures to encode a signal to noise ratio (SNR). The applicants respectfully disagree with this characterization of Oberholtzer. At the reference cited by the Office action, Oberholtzer teaches a control 34 that encodes a measured SNR, but provides no details as to how this encoding is performed, and in particular, does not teach selecting a signature from a plurality of signatures, as specifically claimed in claim 10. As such, the applicants respectfully maintain that the rejection of claim 10 is unfounded, per MPEP 2142.

The Office action rejects claim 11 under 35 U.S.C. 103(a) over Park and Kim et al. (USP 6,249,515, hereinafter Kim). The applicants respectfully traverse this rejection, based on the remarks above regarding Park and claims 1 and 2, upon which claim 11 depends, and based on the following remarks.

In claim 11, an access sub-channel is selected by the secondary station for transmission of an access preamble, based on a quantity to be signaled.

The Office action asserts that Kim teaches selecting different sub-channels to signal different data quantities. The applicants respectfully disagree with this characterization of Kim. Kim teaches a multiple-access control method wherein

Appl. No. 09/825,276
RCE Amendment and
Reply to Final Office action of 27 July 2005

Page 14 of 15

reservations are made by acquiring sub-slots (sub-channels) in the access channel. The choice of a particular sub-slot does not convey any information regarding a quantity to be signaled, and Kim's stations do not select particular sub-slots based on such a quantity. As such, the applicants respectfully maintain that the rejection of claim 11 is unfounded, per MPEP 2142.

The Office action rejects claims 12, 14, 16, and 18 under 35 U.S.C. 103(a) over Park, Belcher et al. (USP 5,920,287, hereinafter Belcher), and Cao. The applicants respectfully traverse this rejection, based on the remarks above regarding Park and claims 1, 2, 13, 15, and 17, upon which claims 12, 14, 16, and 18 depend, and based on the following remarks.

In claim 12, the transmission of the access preamble is offset in time by a number of CDMA chip periods based on a quantity to be signaled.

Claims 14 and 16 include an encoder that offsets the preamble signal in time by a number of chip periods corresponding to the radio channel characteristics.

In claim 18, the indication of the transmit power level includes a timing offset of the access preamble signal relative to a reference time.

The Office action asserts that Belcher teaches the claimed offsetting in time, by a number of chip periods based on a quantity to be signaled. The applicants respectfully disagree with this characterization of Belcher. Belcher does not teach a purposeful offsetting of time to encode a parameter. Belcher does not select a chip period or an offset; Belcher's transmitters are unaware of any offset. Belcher determines the time of arrival of the transmitted signal at multiple receivers to determine the location of the transmitter, based on the relative difference of offsets/chip periods measured at each receiver. Except in the case where the transmitter happens to be equidistant from every receiver, different offsets will be measured, and thus Belcher cannot be said to offset the preamble based on a quantity to be signaled, cannot be said to have an encoder that offsets the preamble corresponding to radio channel characteristics, and cannot be said to teach that the indication of transmit power level includes this offset.

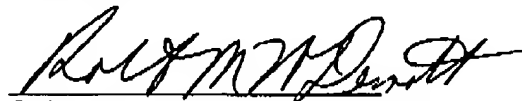
Appl. No. 09/825,276
RCE Amendment and
Reply to Final Office action of 27 July 2005

Page 15 of 15

Because Belcher does not teach offsetting a transmission in time based on a quantity or indication, to communicate this quantity or indication, the applicants respectfully maintain that the rejection of claims 12, 14, 16, and 18 is unfounded, per MPEP 2142.

In view of the foregoing, the applicants respectfully request that the Examiner withdraw the rejections of record, allow all the pending claims, and find the application to be in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



Robert M. McDermott, Attorney
Registration Number 41,508
patents@lawyer.com

1824 Federal Farm Road
Montross, VA 22520
Phone: 804-493-0707
Fax: 215-243-7525